

# Atlantic Richfield Company

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September 5, 2014

Mr. Steven Way  
On-Scene Coordinator  
Emergency Response Program (8EPR-SA)  
US EPA Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

**Delivered via e-mail**

**Subject: August 2014 Monthly Progress Report  
Rico-Argentine Mine Site – Rico Tunnels  
Operable Unit OU01, Rico, Colorado**

Dear Mr. Way,

This progress report describes activities conducted during the month of August 2014 at the Rico-Argentine Mine Site (site) and activities anticipated to occur during the upcoming month. These activities are organized by task as identified in the Removal Action Work Plan. This progress report is being submitted in accordance with Paragraph 35.a of the Unilateral Administrative Order for Removal Action (the "UAO"), dated March 17, 2011 (effective March 23, 2011).

## **ACTIVITIES FOR AUGUST**

This section describes significant developments during the preceding period including actions performed and any problems encountered during this reporting period.

### **Site-Wide Activities**

- Conducted maintenance on the site access road.

### **Task A – Pre-Design and Ongoing Site Monitoring**

- Performed additional evaluation of potential improvements on surface water flow data gathering and telemetry. Continued work on the application for an antenna permit with the Town of Rico.
- Collected groundwater elevation measurements from 17 groundwater monitoring wells in the vicinity of upper ponds 11, 12, 14, 15, and 18 to monitor seasonal groundwater variations.
- Inspected the St. Louis Ponds System, water levels, and free-board.
- Performed cleaning, calibrations, and function checks on the pressure transducers at DR-3 and DR-6.

### **Task B – Management of Precipitation Solids in the Upper Settling Ponds**

- The St. Louis Tunnel discharge was routed to Pond 15 during a portion of the month of August 2014. Began routing St. Louis discharge water into Pond 18 on Thursday, August 21, 2014. Pond 18 embankments and pipe-works were routinely inspected during filling of the pond.
- Completed final edits and additions to the Marine Assurance Plan and Emergency Response Plan for the Pond 14 solids removal work and submitted to the BP Marine Authority.
- Mobilized dredging equipment and other heavy equipment to be used in the Pond 14 Solids removal project to the Rico work site.

- Completed LIDAR survey scans of existing surface of Pond 18 prior to diverting water to the pond.
- Drained Pond 15 and completed LIDAR survey scans of existing surface.
- Drained Pond 14 and completed LIDAR survey scans of existing, pre-removal surface for comparison to post-removal surface for quantity determinations and remaining pond condition.
- Installed 2 head gates at the Pond 15 outlet for water flow direction control.
- Began Pond 14 solids removal with mechanical excavation of the solids on the eastern 25% of Pond 14.
- Launched floating suction dredge and began dredging of remaining Pond 14 solids.
- The St Louis pond system was observed during the month of August including free board and condition of spillways. The pond network appears to be flowing well and in good condition.
- Continued planning for removal of all remaining mining/mineral processing by-products from Upper Ponds.

### **Task C – Design and Construction of a Solids Repository**

- Responded on August 7, 2014 to additional informal questions/comments that were received from the Colorado Department of Public Health and Environment (CDPHE) on August 4, 2014, regarding the revised draft EDOP submitted on May 19, 2014. CDPHE issued a letter dated August 25, 2014 with final comments on the revised draft EDOP. Response to these comments and incorporation of final revisions to the EDOP were initiated.
- Dolores County Commissioners visited the site on August 12, 2014, as part of their ongoing process for issuance of a Certificate of Designation for the Solids Repository.
- Continued construction activities for the Solids Repository:
  - Mobilization and setup of equipment.
  - Demolition and processing of concrete within the footprint of the Solids Repository.
  - Erosion protection and clearing.
  - Excavation from the area of the new access road and placement in the eastern side of the IDF.
  - Placement of fill for the new access road.
  - Coordination with utilities for the relocation of the electrical and telephone lines through the Solids Repository.
- Completed final draft easement agreements with the San Miguel Power Association and Farmers Telephone for undergrounding power and communications lines with all terms agreed to by all parties. Finalized legal descriptions and plat of the underground utility easement in the area of the Solids Repository.

### **Task D – Hydraulic Control Measures for the Collapsed Area of St. Louis Tunnel Adit**

- Initiated preparation of a Work Plan for submittal to EPA summarizing planned two-stage implementation of agreed remedial measures.
- Continued work on developing contractual Statement of Work including final design Drawings and Technical Specifications for issuance to USA Environment (on-site contractor) to implement Stage 1 of the agreed remedial measures in 2014.

### **Task E – Source Water Investigations and Controls**

- Continued Blaine Tunnel water depth and flow monitoring behind the Blaine Coffey Dam and Blaine Tunnel Flume.
- Continued developing responses to comments received from the EPA on June 12, 2014, regarding the *Evaluation of Source Water Controls Report*, which was submitted to EPA on December 31, 2013, in accordance with Subtask E3 of the Removal Action Work Plan.

### **Task F – Water Treatment System Analysis and Design**

- Began developing a decommissioning plan for the pilot-scale wetland infrastructure.



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- Continued wetland demonstration treatability study activities.
  - Completed construction of the St. Louis Tunnel discharge channel flow head wall and head gate to the wetland demonstration.
  - Installed chemical feed tubing from the Former Lime Treatment Plant Building (Lime Plant) to static mixers upstream of Settling Basins 1 and 2 (SB No.1 and 2).
  - Completed construction of the chemical feed system and commenced coagulant injection.
  - Installed electrical conduit from the Lime Plant to junction boxes C-JB-1, C-JB-2, and C-JB-3.
  - Completed SB No. 1 and SB No. 2 construction, including inlet/outlet piping installation, floating baffle installation, HDPE insulating ball installation in SB No. 2, and Agridrain installation.
  - Completed Surface Flow Wetland construction, including inlet/outlet piping installation, topsoil placement, wetland vegetation planting, predation barrier installation, and Agridrain installation.
  - Completed the Horizontal Subsurface Flow Wetland, including inlet/outlet piping installation, matrix material installation, reinforced fiberglass walkways, wetland vegetation planting, predation barrier installation, and Agridrain installation.
  - Completed Aeration Channel construction.
  - Completed Rock Drain construction including matrix material installation, reinforced fiberglass walkways and HDPE insulating ball installation.
  - Completed Vertical Flow (VF) Biotreatment Cell construction, including inlet/outlet piping installation, drain rock installation, matrix material installation, inoculum placement, HDPE insulating ball installation, and Agridrain installation.
  - Completed the Aeration Cascade, including installation of the HDPE troughs, limestone rock, inlet/outlet piping, flow meter, and outlet piping rip-rap.
  - Successfully tested hydrostatic completion of the Flow Diversion Box (FDB), Agridrains, and piping (including overflow from the FDB to Pond 18).
  - Flow was introduced to SB No. 2, with effluent discharged along the bypass pipe to Pond 18, on August 20, 2014, and initial coagulant dose optimization was completed.
  - Flow was introduced to the VF Biotreatment Cell and SB No. 1 on August 27, 2014.
- Continued work on planning and conceptual design of grading/lining selected Upper Ponds for potential conversion to long-term wetlands or open pond lime addition treatment.
- Continued conceptual planning of disposition of Lower Ponds and Upper Ponds not required for long-term wetlands or open pond lime addition treatment.

## ACTIVITIES FOR UPCOMING MONTH

This section describes developments expected to occur during the upcoming reporting period, including a schedule of work to be performed, anticipated problems, and planned resolution of past or anticipated problems.

### Site-Wide Activities

- Continue improving and maintaining site access road.
- Coordinate with Town of Rico to sample and receive lead impacted soils from the town water line replacement project.

### Task A – Pre-Design and Ongoing Site Monitoring

- Inspect the St. Louis Ponds System, water levels, and free-board.
- Collect groundwater elevation measurements from 17 groundwater monitoring wells in the vicinity of upper ponds 11, 12, 14, 15, and 18 to monitor seasonal groundwater variations.
- Continue work on submittal and processing of the application for a telemetry antenna permit for the Rico office building.



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### **Task B – Management of Precipitation Solids in the Upper Settling Ponds**

- Complete Pond 14 Solids Removal, including the following:
  - Maintain water management system per 2014 Solids Removal Work Plan.
  - Dredge remaining Pond 14 material down to the designated two-foot level.
  - Placement of dredged solids into Pond 13.
  - Remove dredge from Pond 14 after completion of the solids removal. Clean and demobilize dredge and equipment.
  - Clean Pond 14 area and remove all Pond 14 dredging materials and equipment. Return all rental equipment to respective vendors.
  - Demobilize Pond 14 solids removal contractor, including all heavy equipment used by contractor.
  - Drain Pond 14 and complete LIDAR survey scan of post-removal surface.
- Continue routing St. Louis Tunnel discharge to Pond 18.
- Continue planning for removal of all remaining mining/mineral processing by-products from Upper Ponds.

### **Task C – Design and Construction of a Solids Repository**

- Respond to final comments and submit final version of EDOP to the CDPHE.
- Execute final easement agreements and file plat with Dolores County for undergrounding of power and communications lines in the area of the Solids Repository.
- Continue construction of the Solids Repository, including construction of access road realignment and relocated underground utility corridor, excavation and fill for the Solids Repository cell and run-on control channel, and maintenance of the temporary haul road to the excess material storage area.

### **Task D – Hydraulic Control Measures for the Collapsed Area of St. Louis Tunnel Adit**

- Finalize Work Plan and submit to EPA.
- Finalize Statement of Work including final design Drawings and Technical Specifications for issuance to USA Environment.
- Initiate procurement of longer lead-time equipment for Stage 1 of the St. Louis Tunnel hydraulic control system.

### **Task E – Source Water Investigations and Controls**

- Continue Blaine Tunnel water depth and flow monitoring behind the Blaine Coffey Dam and Blaine Tunnel Flume.
- Finalize and submit to EPA responses to EPA's comments on the *Evaluation of Source Water Controls Report*.

### **Task F – Water Treatment System Analysis and Design**

- Complete construction of the wetland demonstration system, including telemetry system installation, treatment system access road construction, finish grading, and installation of Safety Plan components (fencing, signage, windsock, life rings, snow delineators, and egress ropes).
- Complete commissioning of the wetland demonstration and perform monitoring activities, in accordance with the Performance Monitoring Plan (Appendix B of the *St. Louis Tunnel Discharge Constructed Wetland Demonstration Treatability Study Work Plan*).
- Complete the Draft Wetland Demonstration Operations, Maintenance and Monitoring Plan.
- Continue scoping additional data needs as necessary related to treatment system alternatives.
- Continue work on planning and conceptual design of removal of all remaining mining/mineral processing by-products from Upper Ponds and grading/lining of selected Upper Ponds for potential conversion to long-term wetlands or open pond lime addition treatment.



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- Continue conceptual planning of disposition of Lower Ponds and Upper Ponds not required for long-term wetlands or open pond lime addition treatment.
- Complete Pilot Scale Wetland Decommissioning Plan and initiate decommissioning of Pilot Scale Wetland.

If you have any questions, please feel free to contact me at (951) 265-4277.

Sincerely,



Anthony R. Brown  
Project Manager  
Atlantic Richfield Company

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